

AMENDMENTS TO THE SPECIFICATION:

Please replace page 12, paragraph 4, beginning at line 23 with:

Explaining the system according to the second embodiment with focus on the differences from that of the first embodiment with references to Figures 7 to 9 (which are similar to Figures 3 to 5 in the first embodiment), the system is configured such that the gate width setting unit 80 is incorporated into the processing delay unit 90 and the current detector 30 is modified to output the discharge current (produced in the secondary coil 10b when the current flow through the primary coil 10a is discontinued) to the processing delay unit 90 in such a way that the integration start time is delayed (masked) to a time point from the termination of the discharge current, more precisely by a time point, which is not earlier than the termination of the discharge current that enables avoidance of the effect of inductive noise.

Please replace page 14, paragraph 2, starting at line 13 with:

It should be noted that, in the system in the second embodiment, since the gate on/off unit 100 only determines the opening of the gate and the gate is left open until it is reset by the next ignition command current pulse, the system cannot exclude the detection of various kinds of noise (such as indicated at D in Figure 11) occurring at times other than during the masking period. Except for the above, the rest of the configuration including the misfire detection by the integrated ionization current is the same as that of the first embodiment.

Please replace page 14, paragraph 4, beginning at line 25 with:

The first and second embodiments are thus configured to have a system for detecting misfire for an internal combustion engine having an ignition plug (24), installed

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to face into a combustion chamber (22) of the cylinder (20) of the engine and connected to an ignition coil (10), which produces spark discharge when supplied with discharge current from the ignition coil to ignite air-fuel mixture in the combustion chamber; including: a current detection circuit (current detector 30) which detects ionization current, that flows following the discharge current, during a period (gate); and a misfire detector (ECU 14) which detects occurrence of misfire of the engine based on the detected circuit. A characterizing feature is that; the system includes: a processing delay circuit (ECU 14, unit 90) which inputs at least one of the discharge current and the ionization current and based on the inputted current, delays starting of the period by a time point which is not earlier than termination of the discharge current.
